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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/987,336	11/14/2001	Kenneth J. Myers	BEU/MYER3007	6915
23364	7590	01/27/2005	EXAMINER	
BACON & THOMAS, PLLC 625 SLATERS LANE FOURTH FLOOR ALEXANDRIA, VA 22314			HANEY, MATTHEW J	
			ART UNIT	PAPER NUMBER
			2613	

DATE MAILED: 01/27/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/987,336

Applicant(s)

MYERS, KENNETH J.

Examiner

Matthew Haney

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-27 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-27 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|--|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date ____ | 6) <input type="checkbox"/> Other: ____ |

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1, 3, and 23 are rejected under 35 U.S.C. 102(b) as being anticipated by Mundy (US 4,349,277).

As for claims 1 and 23, Mundy teaches of first projector arranged project first two-dimensional pattern onto three-dimensional subject, wherein a frequency light forming said first two-dimensional pattern is different than a frequency of light illuminating said subject (Note: Figure 6 shows a projector (22) which forms a two dimensional pattern(36) on a subject (37) and Column 5, Lines 56-58 states that the pattern does more than illuminate subject but it also provides the pattern (i.e. signal)); receiver arranged to optically separate said first two-dimensional pattern from an image of said three-dimensional subject based on said different frequencies of said light forming said first two-dimensional pattern and said light illuminating said subject (Note: Figure 6 shows a receiver (23) which takes the visible light and infrared light and separates it so that specific dents or defects can be detected with great accuracy).

As for claim 3, Mundy teaches of said light pattern being infrared and illumination being visible light (Column 5, Lines 20-58).

Claim Rejections - 35 USC § 103

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3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 2, 4-8, 16-18, and 24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mundy (US 4,349,277) in view of Lu (US 5,852,672).

As for claim 2, most of the limitations of the claim have been discussed in the above rejection of claim 1. Mundy does not teach of the projected pattern being a grid, however, Lu does (Note: Figure 9 and Column 7, Lines 41-65). It would have been obvious to one of ordinary skill in the art at the time of the invention to use a grid instead of only vertical lines so that changes in the object could be located in both the horizontal and vertical direction.

As for claims 4, 5, 17, 18, and 24, most of the limitations of the claim have been discussed in the above rejection of claim 1. Mundy does not teach of using a second projector to produce a second 2-D pattern at a different frequency, however, Lu does (Note: it is within the scope of the invention that the pattern can be done at each set of cameras (See Figure 1) and at different frequencies (Column 15, Lines 40-44) and can the pattern can be optically separated by the receiver (See Column 15, Lines 40-44 and using the method taught by Mundy in the rejection of claim 1). It would have been obvious to one of ordinary skill in the art at the time of the invention to use a plurality of cameras, each with different frequencies, so that different angles of the object could be

imaged at the same time, therefore allowing for the 3-D object to be completely imaged at once.

As for claims 6 and 8, most of the limitations of the claim have been discussed in the above rejection of claim 1. Mundy does not teach of separating two different patterns, however, it is within the scope of Mundy's teaching that two different patterns displayed could be separated using the current receiver (23). It would have been obvious to one of ordinary skill in the art at the time of the invention to use the receiver disclosed by Mundy in order to separate two different patterns when the two different patterns were overlapping but were imaging different parts of the object. Mundy's invention allows for a single receiver to be used instead of multiple receivers for each specific frequency. (Official Notice)

As for claims 7, most of the limitations of the claim have been discussed in the above rejection of claims 1 and 6. Mundy does not teach of adding a second beam splitter to the receiver (23), however, it would have been obvious to one of ordinary skill in the art at the time of the invention to add another beam splitter to the receiver to filter an additional frequency as needed because this would allow multiple patterns to overlap and yet still be imaged using a single receiver (Note: face recognition for security purposes is considered well-known in the art). (Official Notice)

As for claim 16, most of the limitations of the claim have been discussed in the above rejection of claims 2 and 5. Mundy does not teach of using the invention on a person in an airport or airplane, however, Lu does disclose using the invention on a person in different venues (Column 17, Lines 4-17). It would have been obvious to one

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of ordinary skill in the art at the time of the invention to use the invention for security surveillance in an airport or on an airplane (i.e. face recognition).

Claims 9-15, 19-22, and 25-27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mundy (US 4,349,277) in view of Gibson (US 6,262,738).

As for claims 9, 11, and 25, most of the limitations of the claim have been discussed in the above rejection of claim 1. Mundy does not teach of projecting two patterns for distance calculation purposes, however, Gibson does (Note: In the example 3 different patterns are projected as seen in Fig. 11A and these are aligned to form the volumetric pattern shown in Fig. 10, these patterns can be used to triangulate distances to the object). It would have been obvious to one of ordinary skill in the art at the time of the invention to use the two grids already being projected to triangulate a distance to said object in order to allow the camera imaging the surface to be more accurately focused.

As for claims 10, 13-15, 19, 21-22, and 26, most of the limitations of the claim have been discussed in the above rejection of claims 1 and 11. Mundy does not explicitly teach of projecting a hash mark onto said grid, however, it is considered obvious to one of ordinary skill in the art at the time of the invention that the grids aligned in Gibson used hash marks (i.e. the end of the grid pattern) to align with each other appropriately. (Official Notice)

As for claims 12, 20, 27, most of the limitations of the claim have been discussed in the above rejection of claims 11, 17, and 26. Mundy teaches of using laser to project the grids in order to allow the visible light to be separated from the grid (Column 6, Lines 33-56).

Conclusion


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Matthew Haney whose telephone number is 703-305-4915. The examiner can normally be reached on M-Th (5:30-3:00), Every Other Friday Off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chris Kelley can be reached on 703-305-4856. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

mjh

Matthew Haney
Examiner
Art Unit 2613


CHRIS KELLEY
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